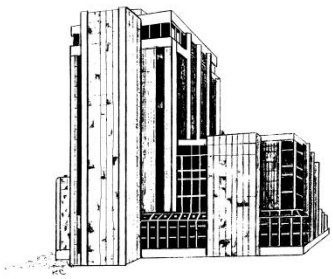

CITY OF HUNTSVILLE
NATURAL RESOURCES AND ENVIRONMENTAL
MANAGEMENT DIVISION

SYNTHETIC MINOR OPERATING PERMIT

Issued to: General Electric Company – GE Aviation

Location: 25235 One Aviation Way

Huntsville, Alabama 35756

Permit Number(s)	**Description of Source(s)**
7-09-P381-Z003	Manufacturing of Silicon Carbide Matrix Composite Tow & Tape and Carbon Fiber Matrix Ply & Shared Plant Utilities

Coating of Silicon Carbide Fiber Tow Using Chemical Vapor Deposition w/Raw Material Recovery (Using Chilled Water Condensers)
Carbon Coating of Silicon Carbide Fiber Tow in Propane Cracking Furnaces w/Cartridge Filters
Production of Silicon Carbide Matrix Composite Tape from Silicon Carbide Matrix Composite Tow in Coating Dip Tanks
Production of Carbon Fiber Matrix Ply in Coating Dip Tanks
Preparation of Coating Slurry in Tank and Transfer Vessels
Air Drying and Winding of Silicon Carbide Matrix Composite Tape and Carbon Fiber Matrix Ply
Two (2) 4-MMBtu/hr Natural Gas-Fired Hot Water Boilers (Low NO_x)
Electric Curing Oven
Cooling Towers
23.9 hp Diesel Engine for Supplied Air Cascade Breathing System
Diesel-Fueled Emergency Generator and Fire Pump Engines
Natural Gas-Fueled Emergency Generator Engines

This permit is issued pursuant to the provisions of Chapter 3 of the Huntsville Air Pollution Control Rules and Regulations.

This permit is subject to the accuracy of all information submitted relating to the application and to the conditions appended hereto, both of which are considered a part of this permit.

This permit is to be kept under file or on display at all times at the location described above and is to be made readily available for inspection by any and all persons who may request to see it.

Date of Issuance: **DRAFT**

Expiration Date: **DRAFT**

DIRECTOR

NATURAL RESOURCES AND ENVIRONMENTAL
MANAGEMENT DIVISION
CITY OF HUNTSVILLE, ALABAMA

SYNTHETIC MINOR OPERATING PERMIT

GENERAL ELECTRIC COMPANY - GE AVIATION
25235 One Aviation Way

Permit No. 7-09-P381-Z003

Manufacturing of Silicon Carbide Matrix Composite Tow & Tape and Carbon Fiber Matrix Ply

Coating of Silicon Carbide Fiber Tow Using Chemical Vapor Deposition w/Raw Material Recovery (Using Chilled Water Condensers)
Carbon Coating of Silicon Carbide Fiber Tow in Propane Cracking Furnaces w/Cartridge Filter
Production of Silicon Carbide Matrix Composite Tape from Silicon Carbide Matrix Composite Tow in Coating Dip Tanks
Production of Carbon Fiber Matrix Ply in Coating Dip Tanks
Preparation of Coating Slurry in Tank and Transfer Vessels
Air Drying and Winding of Silicon Carbide Matrix Composite Tape and Carbon Fiber Matrix Ply
Two (2) 4-MMBtu/hr Natural Gas-Fired Hot Water Boilers (Low NO_x)
Electric Curing Oven
Cooling Towers
23.9 hp Diesel Engine for Supplied Air Cascade Breathing System
Diesel -Fueled Emergency Generator and Fire Pump Engines
Natural Gas-Fueled Emergency Generator Engines

1. This Permit is issued on the basis of the Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.

2. This Permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within thirty (30) days.

3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants.

4. In the event there is a breakdown of equipment in such a manner as to cause increased emission of air contaminants for a period greater than one (1) hour, the person responsible for such equipment shall notify the Department within an additional twenty four (24) hours and provide a statement giving all of the pertinent facts, including the duration of the breakdown. The Department shall be notified when the breakdown has been corrected.

5. Submission of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's Air Pollution Control Rules and Regulations.

6. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's Air Pollution Control Rules and Regulations are not violated.

7. This Permit is issued with the provision that the operation of this facility by the owner or operator will not result in the emission of odors as defined in the Air Pollution Control Rules and Regulations.

8. All emission capture and control equipment shall be operated so as to minimize the emission of air contaminants. Procedures for ensuring that the equipment is properly operated and maintained shall be established. These procedures are subject to approval by the Director.

9. Emissions of each individual Hazardous Air Pollutant (HAP) and total HAPs from the sources covered under this Permit shall be calculated in pounds per calendar month, based on a twelve-(12)-month rolling average.

10. Emissions of Volatile Organic Compounds (VOC) from the sources covered under this Permit shall be calculated in pounds per calendar month, based on a twelve-(12)-month rolling average.

11. The specific HAP emission factors used to calculate HAP emissions from the coating of silicon carbide fiber tow using chemical vapor deposition included in the calculations required by Item 9 above shall be production-based emission factors developed from testing performed at the facility covered under this Permit, which utilized the silicon carbide fiber tow throughput during the course of test performance and the mass emission rate measured during testing.

12. Records of the quantity of silicon carbide fiber tow fed through the chemical vapor deposition coating process shall be maintained on a monthly basis and shall be prepared in a form suitable for inspection within thirty (30) days of the end of the calendar month during which the silicon carbide fiber tow was coated.

13. Documentation of the development of the production-based uncontrolled emission factors required in Item 11 above shall be maintained at the facility in a form suitable for inspection.

14. Records of raw materials (organic solvents and processing aids) used in the manufacturing of silicon carbide matrix composite tow and tape and carbon fiber matrix ply that contain VOC shall be maintained which, as a minimum, include the following information:

    (A) the quantity of each VOC-containing material used in the manufacturing of silicon carbide matrix composite tow and tape and carbon fiber matrix ply during each calendar month, in gallons;

    (B) the density of each VOC-containing material used in the manufacturing of silicon carbide matrix composite tow and tape and carbon fiber matrix ply, in pounds per gallon; and

    (C) the composition, by weight, of each VOC-containing material used in the manufacturing of silicon carbide matrix composite tow and tape and carbon fiber matrix ply. As a minimum, the information on material composition must include the total VOC and the weight percent (or weight fraction). Certification of material composition by the manufacturer may serve to satisfy this requirement.

15. The permittee may deduct the amount of VOC shipped as waste from the calculated VOC emissions required in Item 10 above. If included, testing of each type of VOC waste stream must be performed at least annually to determine the VOC content. VOC content shall be determined using EPA Reference Method 24 included in 40 CFR Part 60 Appendix A or other method approved by the Director.

16. In the event the VOC emissions calculated pursuant to Item 10 above are adjusted for VOC shipped off-site as waste, then records of waste shipped off-site for disposal shall be maintained which, as a minimum, include the following information:

    (A) the quantity of each organic solvent or processing aid waste shipped off-site for disposal during the calendar month, in gallons;

    (B) the density of each organic solvent or processing aid waste shipped off-site for disposal, in pounds per gallon;

    (C) the date and time of annual sample collection made pursuant to Item 15 above;

(D) the date and time of each analysis (VOC content, and density);

(E) the person performing each analysis; and

(F) the analytical test method used in conducting each analysis (VOC content, and density).

17. Records of monthly facility-wide natural gas, LP gas and diesel fuel usage shall be maintained. Billing information from the fuel supplier may be used to satisfy this requirement provided the volume and type of fuel consumed is clearly shown on the billing statement.

18. Process throughput records maintained pursuant to Item 12 above, material usage records maintained pursuant to Item 14 above, waste shipment records maintained pursuant to Items 15 and 16 above, and fuel usage records maintained pursuant to Item 17 above shall be prepared in a form suitable for inspection within thirty (30) days of the end of the calendar month during which the materials were processed or used, the wastes were shipped or the fuel was burned.

19. The results of all calculations performed pursuant to Items 9, 10, and 15 above shall be prepared in a form suitable for inspection within thirty (30) days of the end of the calendar month during which the HAP or VOC were emitted.

20. An emissions control device operations and maintenance plan (preventive maintenance program) shall be developed and implemented which, as a minimum, satisfies the following criteria:

(A) identifies each control device;

(B) identifies inspection frequency for each control device;

(C) includes a checklist for each piece of equipment which describes the scope of operational and preventive maintenance inspections;

(D) identifies important operational parameters (e.g. pressure drop, chilled water condenser temperature, etc.), indicates their normal operating range, and provides for measuring these parameters, as appropriate, during operational and preventive maintenance inspections. As a minimum, the pressure drop across each fabric filter, and operating temperature of the chilled water condenser shall be recorded during operational and preventive maintenance inspections;

(E) identifies corrective action to be initiated in the event problems are identified during

the course of operational and preventive maintenance inspections;

(F) provides for documenting the results of operational and preventive maintenance inspections for future reference (identify recurrent problems, gradual changes in operating parameters, etc.).

21. The emissions control device operations and maintenance plan (preventive maintenance program) developed pursuant to Item 20 above, and all records documenting implementation of the plan, shall be available for inspection by the Department at all reasonable times. The emissions control device operations and maintenance plan (preventive maintenance program) is subject to approval by the Department. Prior to implementation of any revisions to the operations and maintenance plan, the proposed changes must be submitted to the Department and written approval must be obtained from the Director. The Department may require that the emissions control device operations and maintenance plan (preventive maintenance program) be revised to ensure that the COHRAR are not violated.

22. The diesel-fueled Supplied Air Cascade Breathing Air System engine is subject to New Source Performance Standards (NSPS) for Stationary Compression Ignition (CI) Internal Combustion Engines codified at 40 CFR Part 60 Subpart IIII.

23. The diesel-fueled Supplied Air Cascade Breathing Air System engine shall be certified by the manufacturer as compliant with the emission standards for new non-road CI engines in 40 CFR § 60.4201.

24. The diesel-fueled Supplied Air Cascade Breathing Air System engine must be installed and configured according to the manufacturer's emission-related specifications.

25. The diesel-fueled emergency generator and fire pump engines are subject to New Source Performance Standards (NSPS) for Stationary Compression Ignition (CI) Internal Combustion Engines codified at 40 CFR Part 60 Subpart IIII.

26. The natural gas-fueled emergency generator engine is subject to New Source Performance Standards (NSPS) for Stationary Spark Ignition (SI) Internal Combustion Engines codified at 40 CFR Part 60 Subpart JJJJ.

27. The natural gas-fueled emergency generator, diesel-fueled emergency generator, and diesel-fueled fire pump engines are to be operated as emergency stationary RICE (Reciprocating Internal Combustion Engines), as defined in 40 CFR § 63.6675, and as emergency stationary ICE (Internal Combustion Engines) as defined in § 60.4248 and § 60.4219.

28. In addition to operation in emergency situations, each emergency generator or fire pump engine may be operated for necessary maintenance checks and readiness testing provided that such operation does not exceed one-hundred (100) hours per calendar year. Each engines may also be operated for up to fifty (50) hours per calendar year in non-emergency situations. The fifty (50) hours per year of non-emergency operation are counted as part of the one-hundred (100) hours per calendar year for maintenance and readiness testing. Furthermore, the fifty (50) hours per calendar year of non-emergency operation cannot be used for peak shaving or non-emergency demand response or to generate income for a facility to the power grid or otherwise supply power as part of a financial arrangement with another entity.

29. Each diesel-fueled emergency generator or fire pump engine shall meet the applicable emissions limitations included in 40 CFR § 60.4205. Certification by the engine manufacturer may be used to satisfy this requirement, but such certification does not preclude the Director from requiring emissions testing to demonstrate compliance with the emissions limitations.

30. Each natural gas-fueled emergency generator engine shall meet the applicable emissions limitations included in 40 CFR § 60.4233. Certification by the engine manufacturer may be used to satisfy this requirement, but such certification does not preclude the Director from requiring emissions testing to demonstrate compliance with the emissions limitations.

31. Each emergency generator or fire pump engine must be equipped with a non-resettable hour meter.

32. Records of the hours of operation of each emergency generator or fire pump engine must be maintained which are recorded through the non-resettable hour meters required by Item 31 above. These records shall include how many hours are spent for emergency operation, including what classified the operation as emergency, and how many hours are spent for non-emergency operation, including a description of the non-emergency operation sufficiently detailed to demonstrate that the restrictions on non-emergency operation included in Item 28 above have not been violated.

33. Each emergency generator or fire pump engine must be installed, operated and maintained in accordance with the manufacturers' recommendations. Records of all maintenance performed on each engine shall be maintained in a form suitable for inspection.

34. Only ultra low sulfur diesel (ULSD) fuel shall be fired in the diesel-fueled engines.

35. All records required by this permit, and all supporting documentation, shall be kept on file for a minimum period of five (5) years and must be available for inspection by the Director or his authorized representative at all reasonable times. Electronic records are acceptable provided they are in a form suitable for inspection and are readily available for inspection.

DRAFT
Date